

Di-Jet Mass Resolution Group

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Goal is to use all the detector information available, as well as good control of physics effects, to improve resolutions.

Simple application of tracker resolution to tracks, EM resolution to photons, and HAD resolution for neutrons/KLong, leads to x3 improvement in mass resolution.

So we are limited by our cleverness...

We've had several groups develop algorithms, and usually apply them to photon+jet data or Z+jet data.

The physics of initial state radiation in these samples makes them much harder to use for resolution than setting E_{scale} .

We are ready for a detailed Monte Carlo study of $Z \rightarrow q\bar{q}$, making plots such as these I made for a Linear Collider study:

